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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

RYMAN, DANIEL J

ART UNIT

PAPER NUMBER

2665

DATE MAILED: 12/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/839,943

Applicant(s)

CHOKSI, OJAS T.

Examiner

Daniel J. Ryman

Art Unit

2665

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 07 November 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-3, 5-11, 13-19 and 21-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3, 6-11, 14-19 and 22-27 is/are rejected.
- 7) ☐ Claim(s) 5, 13 and 21 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Response to Arguments***

1. Applicant's arguments with respect to claims 1-3, 6-11, 14-19, and 22-27 have been considered but are moot in view of the new ground(s) of rejection.

### ***Specification***

2. Examiner requests that Applicant update the application information on pg. 1, lines 2-6 to reflect any changes in the status of that application.

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 3, 6-9, 11, 14-17, 19, and 22-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wager et al. (USPN 6,519,223) in view of Strawczynski et al. (USPN 6,628,641) in further view of Cheng et al. (USPN 6,088,342) and Rathonyi et al. (USPN 6,532,211).
5. Regarding claims 1, 9, 17, 25, and 26, Wager discloses a method and system for efficient utilization of transmission resources in a wireless network, the method comprising the steps of and the system comprising means for: in response to at least unsuccessfully receiving a radio frame for a packet from a wireless link, requesting retransmission of the frame up to an allowed number of retransmissions (col. 4, lines 38-67); and in response to at least unsuccessfully receiving the frame from the allowed number of retransmissions, generating a signal for

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transmission to a device receiving the frame, the signal operable to ensure that the device discards a set of remaining frames for the packet (col. 5, line 57-col. 6, line 1).

Wager does not expressly disclose that in response to at least unsuccessfully receiving the frame from the allowed number of retransmissions, generating a signal for transmission to a device transmitting the frame, the signal operable to prevent the device from transmitting a set of remaining frames for the packet. Strawczynski teaches, in a wireless transmission system (CDMA system re. claim 25) (col. 3, lines 56-58), in response to at least unsuccessfully receiving the frame from the allowed number of retransmissions, generating a signal for transmission to a device transmitting the frame, the signal operable to prevent the device from transmitting a set of remaining frames for the packet (col. 8, lines 2-20) in order to “ensure that bandwidth is not wasted” (col. 7, line 66-col. 8, line 1). Here, the signaling of Wager and Strawczynski achieves the same result, namely ensuring that bandwidth is not wasted, however the implementation is different. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to substitute the signaling of Strawczynski for the signaling of Wager since these signaling systems are equivalent. Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to, in response to at least unsuccessfully receiving the frame from the allowed number of retransmissions, generate a signal for transmission to a device transmitting the frame, the signal operable to prevent the device from transmitting a set of remaining frames for the packet in order to ensure that bandwidth is not wasted.

Wager in view of Strawczynski does not expressly disclose determining a position of the frame in a set of related frames for the packet, wherein a sequence number corresponds to the

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position of the frame, and then determining the allowed number of retransmissions for the frame based on the position of the frame in the set of related frames. However, Wager in view of Strawczynski discloses varying the allowed number of transmissions for a frame (Wager: col. 2, lines 56-58 and col. 5, lines 32-36). Cheng teaches, in a wireless communication system, dynamically determining an allowed number of retransmissions for a frame (col. 3, line 65-col. 4, line 3) in order to prevent delays and quality of service degradations (col. 4, lines 32-36). Rathonyi teaches that a retransmitted frame at the end of a packet will cause more delay for the packet than a retransmitted frame in the middle of the packet (col. 2, lines 46-61). Examiner takes official notice that using sequence numbers to determine a position of a packet in a frame is well known in the art. Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to determine a position of the frame in a set of related frames for the packet, wherein a sequence number corresponds to the position of the frame, and to determine the allowed number of retransmissions for the frame based on the position of the frame in the set of related frames in order to prevent delays and quality of service degradations for the packet.

6. Regarding claims 3, 11, and 19, Wager in view of Strawczynski in further view of Cheng and Rathonyi implicitly discloses that the radio frame identifies the packet and the signal for transmission to the device transmitting the frame identifies the packet (Strawczynski: col. 8, lines 2-20).

7. Regarding claims 6, 14, and 22, Wager in view of Strawczynski in further view of Cheng and Rathonyi suggests that the set of related frames comprises all frames for the packet (Rathonyi: col. 2, lines 46-61).

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8. Regarding claims 7, 15, and 23, Wager in view of Strawczynski in further view of Cheng and Rathonyi suggests that the set of related frames comprises a set of successfully received frames for the packet (Rathonyi: col. 2, lines 46-61).

9. Regarding claims 8, 16, and 24, Wager in view of Strawczynski in further view of Cheng and Rathonyi discloses that the signal for transmission to the device transmitting the frame is operable to prevent the device from transmitting the set of remaining frames by causing the device to drop the set of remaining frames (Strawczynski: col. 8, lines 2-20).

10. Claims 2, 10, 18, and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wager et al. (USPN 6,519,223) in view of Strawczynski et al. (USPN 6,628,641) in further view of Cheng et al. (USPN 6,088,342) and Rathonyi et al. (USPN 6,532,211) as applied to claims 1, 9, and 17 above, and further in view of Lazraq et al. (USPN 6,330,435).

11. Regarding claims 2, 10, 18, and 27, Wager in view of Strawczynski in further view of Cheng and Rathonyi does not expressly disclose that the signal comprises a bitmap identifying the frame and identifying a disparate frame for retransmission. Lazraq teaches, in a system for signaling a packet discard notification, having the signal comprise a bitmap identifying the frame and identifying a disparate frame for retransmission (Fig. 6) (col. 3, lines 4-48) when the sequence numbers of the frames are not in sequence (col. 3, lines 4-16). Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to have the signal comprise a bitmap identifying the frame and identifying a disparate frame for retransmission for situations in which the sequence numbers of the frames are not in sequence.

*Allowable Subject Matter*

12. Claims 5, 13, and 21 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The prior art suggests that the allowed number of retransmissions would decrease as the number of successful frame transmissions increased in order to decrease the delay of the packet. *See* Rathonyi et al. (USPN 6,532,211), col. 2, lines 46-61.

*Conclusion*

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel J. Ryman whose telephone number is (571)272-3152. The examiner can normally be reached on Mon.-Fri. 7:00-4:30 with every other Friday off.


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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on (571)272-3155. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Daniel J. Ryman  
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